

THE INVENTION CLAIMED IS

1. An identification apparatus for use in connection with a plurality of discrete identity source elements positioned in an identification apparatus signal identification area, the identification apparatus comprising:

at least one signal receiving mechanism configured to receive a signal emitted from at least one of the plurality of identity source elements, the signal receiving mechanism having a field of detection comprising at least a portion of the identification apparatus signal identification area, wherein the at least one signal receiving mechanism is configured to move along at least one axis of movement; and

a control mechanism in communication with the at least one signal receiving mechanism and configured to at least one of:

(i) control the movement of the at least one signal receiving mechanism along the at least one axis of movement; and

(ii) receive, process, and transmit the signal received by the at least one signal receiving mechanism.

2. The identification apparatus of claim 1, wherein the signal receiving mechanism is an antenna configured to receive radio frequency signals emitted from the identity source elements, and wherein the identity source elements are radio frequency identification transponders.

3. The identification apparatus of claim 1, wherein at least one of the identity source elements is in operative communication with at least one item positioned in the identification apparatus signal identification area.

4. The identification apparatus of claim 3, wherein the at least one item is at least one of a medical item, a container of medicine, a medical device and a hospital-related item.

5. The identification apparatus of claim 3, wherein the signals emitted by the identity source elements is a signal having a characteristic unique to one of the at least one item and a group of related items.

6. The identification apparatus of claim 1, wherein the control mechanism further comprises:

an input/output mechanism in communication with the signal receiving mechanism and configured to translate at least one output signal into at least one digital output signal; and

a central control device in communication with the input/output mechanism and configured to receive, process and transmit signals and initiate an action based upon the at least one digital output signal received from the input/output mechanism.

7. The identification apparatus of claim 6, wherein the control mechanism further comprises a power control module in communication with the input/output mechanism and configured to provide specified power outputs at specified power levels.

8. The identification apparatus of claim 7, further comprising a backup power module in communication with the input/output mechanism and configured to supply power in the event of an electronic power failure.

9. The identification apparatus of claim 6, wherein the central control device is one of a programmable microchip, a microcontroller, a personal computer, a hand-held computer, a terminal and a networked computing device.

10. The identification apparatus of claim 1, further comprising a display mechanism in communication with the control mechanism and configured to provide a visual display to a user corresponding to one of an action initiated by the control mechanism, a use history, an item history, a user history, user data, identity source element data, inventory data, item data and identification apparatus data.

11. The identification apparatus of claim 1, further comprising an input mechanism in communication with the control mechanism and configured to receive user input and transmit user input signals to the control mechanism.

12. The identification apparatus of claim 1, wherein the identity source elements are at least one of tags and labels affixed to at least one item and configured to emit a unique signal corresponding to the at least one item.

13. The identification apparatus of claim 1, wherein the control mechanism includes a control program configured to receive, process and transmit signals and initiate actions based upon signal content.

14. The identification apparatus of claim 1, further comprising a feed mechanism in communication with the control mechanism and configured to power the signal receiving mechanism.

15. The identification apparatus of claim 1, further comprising a drive mechanism configured to move the signal receiving mechanism along the axis of movement.

16. The identification apparatus of claim 15, wherein the drive mechanism is a stepper motor.

17. The identification apparatus of claim 15, wherein the drive mechanism motivates the signal receiving mechanism to move back and forth along the axis of movement, the operation of the drive mechanism controlled by the control mechanism.

18. A method of receiving a signal from at least one of a plurality of identity source elements positioned in a signal identification area, comprising the steps of:

- (a) moving a signal receiving mechanism along at least one axis of movement;
- (b) receiving a signal emitted by at least one of the plurality of identity source elements by the signal receiving mechanism; and
- (c) controlling the movement of the signal receiving mechanism by a control mechanism.

19. The method of claim 18, further comprising the step of positioning at least one identity source element in operative communication with at least one item.

20. The method of claim 19, further comprising the step of positioning the at least one item in a identification apparatus signal identification area.

21. The method of claim 19, wherein the at least one item is at least one of a medical item, a container of medicine, a medical device and a hospital-related item.

22. The method of claim 18, wherein the controlling step is performed by one of a programmable microchip, a microcontroller, a personal computer, a hand-held computer, a terminal and a networked computing device.

23. The method of claim 18, further comprising the step of visually displaying to a user at least one of an action initiated by the control mechanism, a use history, an item history, a user history, user data, identity source element data, inventory data, item data and identification apparatus data.

24. The method of claim 18, wherein the identity source elements are at least one of tags and labels affixed to at least one item and configured to emit a unique signal corresponding to the at least one item.

25. The method of claim 18, further comprising the step of powering the signal receiving mechanism.

26. The method of claim 18, wherein the step of moving the signal receiving mechanism along the axis of movement is accomplished by a drive mechanism.

27. The method of claim 26, wherein the drive mechanism is a stepper motor.

28. The method of claim 18, further comprising the step of moving the signal receiving mechanism back and forth along the axis of movement.